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(58) Field of search

B6A

(54) **Preventing unauthorised copying**

(57) In a method of preventing unauthorised copying of documents or the like each sheet is preprinted or overprinted with a normally barely visible or non-visible dye which fluoresces when copied, unless a "copyright fee paid" button of a special copying machine is pressed to effect illumination of documents for copying without stimulating the dye.

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SPECIFICATION

Copying machines

5 The present invention relates to copying machines and to the control of copying of copyright material.

In particular the invention is concerned with the control of copying of copyright material in the form of documents, drawings, pages of literary works,
10 manuscripts or the like, hereinafter for convenience collectively referred to as documents and the like.

Much material of this form embodies appreciable artistic endeavour or drafting skill and effort, and the owners of the copyright in this material naturally
15 wish to enforce their rights as far as possible.

However, the widespread use of photocopying and plain-paper copying machines presently permits virtually unrestricted copying of such material without payment of appropriate copying fees.

20 According to one aspect of the present invention a method of preparing copyright material for the control of copying thereof, comprises printing each page or sheet of said copyright material with a transparent ink either barely or not visible to the
25 unaided eye, this ink having a constituent which emits light of a wavelength or wavelengths within the visible spectrum when stimulated by radiation of shorter wavelength.

Preferably said radiation of shorter wavelength is
30 within the spectrum of light sources used in conventional reprographic copying machines.

The ink may substantially cover an area or the whole surface of each sheet, or may be printed in a form of words such as "illegally copied" or "copy-
35 right material".

According to another aspect of the invention in a copying machine for making copies of copyright material in the form of documents and the like including a light source for illuminating the docu-
40 ment or the like to be copied, said light source is arranged to have selectively one of two differing spectral energy distributions in dependence upon the condition of a manually operable control, such that a transparent ink having a constituent which
45 emits light of a wavelength or wavelengths indicated within the visible spectrum when stimulated by radiation of shorter wavelength, which ink may be deposited on a page or sheet of said material to be copied so as normally to be either barely visible or
50 not visible to the unaided eye, is selectively stimulated or not, so as to affect copies of that page or sheet of material, in dependence upon the condition of said control.

The light source may comprise two or more lamps
55 of different types energisable selectively to obtain said differing spectral energy distributions. Alternatively said light source may be provided with a filter which selectively may be interposed between one or more lamps and the material to be copied.

60 The said constituent of the ink may be a fluorescent dye which emits light towards the longer wavelength end of the visible spectrum when stimulated by light of below a critical wavelength. The filter, which would be arranged to substantially cut
65 off light of said critical wavelength or below, may be

interposed or not in dependence upon a "copyright fee paid" button or control.

Thus when the fee is paid, or at least its payment acknowledged, the fluorescent dye will not be
70 activated, and the normally transparent ink marking will not appear on the copy of the prepared original.

CLAIMS

75 1. A method of preparing copyright material for the control of copying thereof comprising printing each page or sheet of said copyright material with a transparent ink either barely visible or not visible to the unaided eye, this ink having a constituent which
80 emits all light of a wavelength or wavelengths within the visible spectrum when stimulated by radiation of shorter wavelength.

2. A method in accordance with Claim 1 where said radiation of shorter wavelength is within the
85 spectrum of light sources used in conventional reprographic copying machines.

3. A method in accordance with Claim 1 or Claim 2 wherein the ink substantially covers an area or the whole surface of each sheet.

90 4. A method in accordance with Claim 1 or Claim 2 wherein the ink is printed in the form of words.

5. A copying machine for making copies of copyright material in the form of documents and the like including a light source for illuminating the document or the like to be copied, wherein said light source is arranged to have selectively one of two differing spectral energy distributions upon the condition of a manually operable control, such that a transparent ink having a constituent which emits
100 light of a wavelength or wavelengths within the visible spectrum when stimulated by radiation of shorter wavelength, which ink may be deposited on a page of said material to be copied so as normally to be either barely visible or not visible to the naked
105 eye, is selectively stimulated or not, so as to affect copies made of that page or sheet of material, in dependence upon the condition of said control.

6. A copying machine in accordance with Claim 5 wherein the light source comprises two or more
110 lamps of different types energisable to obtain said differing spectral energy distributions.

7. A copying machine in accordance with Claim 5 wherein said light source may be provided with a filter which selectively may be interposed between
115 one or more lamps and the material to be copied.

8. A copying machine in accordance with Claim 7 wherein the constituent of the ink is a fluorescent dye which emits light towards the longer wavelength end of the visible spectrum when stimulated by light
120 below a critical wavelength, and the filter is arranged to substantially cut off light of said critical wavelength or below.

9. A copying machine in accordance with Claim 7 or Claim 8 wherein the filter is selectively interposed
125 in dependence upon a "copyright fee paid" button or control.